Appendix D
Acronyms, Abbreviations, and Definitions

AAC	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
AGFD	Arizona Game and Fish Department
Agricultural Irrigation (AgI)	Surface water is used for the irrigation of crops.
Agricultural Livestock Watering (AgL)	Surface water is used as a supply of water for consumption by livestock.
Aquatic and Wildlife Coldwater Fishery (A&Wc)	Surface water used by animals, plants, or other organisms (including salmonid fish) for habitation, growth, or propagation, generally occurring above 5000 feet elevation.
Aquatic and Wildlife Effluent Dependent Water (A&Wedw)	Surface water that consists of discharges of treated wastewater that is classified as an effluent dependent water by ADEQ under R18-11-113 of the Arizona Administrative Code. An effluent dependent water, without the discharge of treated wastewater, would be an ephemeral water. This surface water is used by animals, plants, or other organisms for habitation, growth, or propagation.
Aquatic and Wildlife Ephemeral (A&We)	Surface water that has a channel that is at all times above the water table, and that flows only in direct response to precipitation. Ephemeral water is used by animals, plants, or other organisms (excluding fish) for habitation, growth, or propagation.
Aquatic and Wildlife Warmwater Fishery (A&Ww)	Surface water used by animals, plants, or other organisms (excluding salmonid fish) for habitation, growth, or propagation, generally occurring at elevations less than 5000 feet.
BEHI	Bank erosion hazard index.
Biological Communities	Groups of fish, macroinvertebrates, algae, or riparian vegetation occupying a habitat or area.
BLM	United States Bureau of Land Management
Body Contact	(See Full Body Contact and Partial Body Contact)
BoR	United States Bureau of Reclamation
CERCLA	Comprehensive Environmental Response Compensation and Liability Act. EPA's Superfund Program.
Core Parameters	Although all parameters with numeric standards are used for assessments, there needs to be at least three sampling events with these specified parameters to assess a designated use as "attaining." This specified parametric coverage does not need to be available to assess a designated use as "impaired."
Credible Data	Surface water monitoring data that is collected meeting requirements established in the Impaired Water Identification Rule (R18-11-602). These requirements include collecting and analyzing data using a Quality Assurance Plan, Sampling and Analysis Plan, approved methods, approved laboratory, and adequately trained personnel.

Designated Uses	Designated uses are specified for stream segments and lakes in the surface water rules (Arizona Administrative Code R18-11-104). Surface waters not listed in the rules obtain their designated uses through the "Tributary Rule". Arizona=s surface water designated uses include: **Aquatic and Wildlife** **Coldwater Fishery** (A&Wc) **Warmwater Fishery** (A&Ww) **Ephemeral Stream** (A&We) **Effluent Dependent Water** (A&Wedw), **Domestic Water Source** (DWS), **Fish Consumption** (FC), **Full Body Contact** (FBC) (i.e., swimming), **Partial Body Contact** (PBC) (i.e., non-swimming recreation), **Agricultural Irrigation** (AgI), and **Agricultural Livestock Watering** (AgL).
Designated Use Support	**Attaining** B Surface water quality standards are being met based on a minimum of 3 monitoring events that provide seasonal representation and core parametric coverage. **Threatened B** Surface water quality standards are currently being met, but a trend analysis indicates that the surface water is likely to be impaired before the next assessment. **Impaired** B Surface water quality standards are not being met based on sufficient number of samples to meet the test of impairment identified in the Impaired Waters Identification Rule **(Appendix B)**. **Inconclusive** B Monitoring or other assessment information available is insufficient to assess the surface water as "attaining," "threatened," or "impaired."
Domestic Water Source (DWS)	Surface water is used as a potable water supply. Coagulation, sedimentation, filtration, disinfection or other treatments may be necessary to yield a finished water suitable for human consumption.
Effluent Dependent Water	(See Aquatic and Wildlife Effluent Dependent Water)
EMAP	US Environmental Protection Agency's Environmental Monitoring and Assessment Project.
EPA or USEPA	The United States Environmental Protection Agency
Ephemeral Flow	(See Aquatic and Wildlife Ephemeral Water)
Exceed/Exceedance	Monitoring data results were above a maximum water quality criterion or below a minimum water quality criterion.
Fish Consumption (FC)	Surface water is used by humans for harvesting aquatic organisms for consumption. Harvestable aquatic organisms include, but are not limited to, fish, clams, crayfish, and frogs.
Full Body Contact (FBC)	Surface water use causes the human body to come into direct contact with the water to the point of complete submergence (e.g., swimming). Assumes that some ingestion is likely to occur and sensitive body organs (e.g., eyes, ears, or nose) may be exposed to direct contact with the water
IBWC	International Boundary and Water Commission, an international commission established to resolve water quality issues along the United States border with Mexico.
Intermittent Flow	Surface water flows continuously only at certain times of the year, as when it receives water from springs or from some surface source such as melting snow (i.e., seasonal).
Macroinvertebrates	Stream bottom dwelling insects and other organisms that inhabit freshwater habitats for at least part of their life cycle and are retained by a mesh screen size greater than 0.2 millimeters.
Narrative Water Quality Standards	(R18-11-108) Surface waters will be free from pollutants in amounts or combinations that: - Settle to form bottom deposits that impair aquatic life or recreational uses; - Cause an objectionable odor; - Cause an off-taste or odor in drinking water; - Cause an off-flavor in aquatic organisms or waterfowl; - Are "toxic" to humans, animals, plants, or other organisms; - Cause the growth of algae or aquatic plants that impair aquatic life or recreational uses; - Cause or contribute to a violation of an aquifer water quality standard (R18-11-405 through 406); or

	- Change the color of the surface water from natural background levels.
NAWQA	The US Geological Survey's National Water Quality Assessment Program.
Nonpoint Source	These sources of pollutants come from non-discrete discharges such as atmospheric deposition, contaminated sediment, and land uses that generate polluted runoff like agriculture, urban land development, forestry, construction, and on-site sewage disposal systems. Nonpoint source pollution also encompasses activities that either change the natural flow regime of a stream or wetland or result in habitat disturbance.
NPDES / AZPDES	National Pollutant Discharge Elimination System is a federal point source discharge permit. ADEQ has obtained primacy for this program, which uses the acronym AZPDES in describing this permit.
Partial Body Contact (PBC)	Surface water is used so that the human body comes into direct contact with the water, but normally not at the point of complete submergence (i.e., non-swimming recreation). The use is such that ingestion of the water is not likely to occur, nor will sensitive body organs (e.g., eyes, ears, or nose) normally be exposed to direct contact with the water.
Perennial Flow	Surface water that flows continuously.
Point Source	These sources of pollution are discrete, identifiable sources such as pipes or ditches that are primarily associated with industries and municipal sewage treatment plants. (See nonpoint source.)
Public Water Supply	A water system which conveys water for human consumption to 15 or more service connections or serves an average of at least 25 persons per day (as defined by the federal Safe Drinking Water Act).
QAP	Quality Assurance Plan. This is a written plan detailing how environmental data will be collected, analyzed, assessed for quality, and establishes the data quality objectives that the data must meet.
Reach	A segment of a stream. EPA originally divided Arizona's streams on the USGS hydrology at 1:100,000 scale map into reaches based on hydrological features such as tributaries. ADEQ has further subdivided these reaches based on changes in designated use support and water quality.
Sampling Event	A "sampling event" is one or more samples taken under consistent conditions on one or more consecutive days at a specific location.
SAP	Sampling and Analysis Plan. This is a written site-specific plan to ensure that samples collected and analyzed meet data quality objectives and are representative of surface water conditions at the time of sampling.
Surface Water	These are "waters of the United States", which include: - All waters which are, have been, or could be used for interstate or foreign commerce; - All interstate waters or wetlands; - All lakes, reservoirs, natural ponds, rivers, streams (including intermittent and ephemeral streams), creeks, washes, draws, mudflats, sandflats, wetlands, backwaters, playas (etc.) which could be used by visitors to our state for recreation, from which fish or shellfish could be taken or sold, or which is used for industrial purposes; or - All impoundments, wetlands, or tributaries of above waters. (Summarized from Arizona Administrative Code R18-11-101)
Toxic Chemicals	Pollutants or combinations of pollutants which, after discharge and exposure (contact, ingestion, inhalation, or assimilation) to any organism (either directly from the environment or indirectly through the food chain), may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in such organisms or offspring.
TMDL	Total Maximum Daily Load. A TMDL is a written, quantitative plan and analysis to determine the maximum loading on a pollutant basis that a surface water can assimilate and still attain and maintain a specific water quality standard during all conditions. The TMDL allocates the loading capacity of the surface water to point sources and nonpoint sources identified in the watershed, accounting for natural background levels and seasonal variation, with an allocation set aside as a margin of safety.

Tributary Rule	This rule (Arizona Administrative Code R18-11-105, amended in 2002) is used to determine "Designated Uses" for surface waters not specifically listed in the surface water protection rules. Uses are assigned as follows: • Ephemeral waters are assigned the Aquatic and Wildlife ephemeral and Partial Body Contact uses only. • Perennial and intermittent waters are assigned Fish Consumption, Full Body Contact, and Aquatic and Wildlife coldwater (A&Wc) if above 5,000 feet or warmwater (A&Ww) if below 5,000 feet elevation. Agricultural uses and Domestic Water Source are not applied to these waters.
Trophic Status	Lakes can be classified by the level of nutrients available for primary biological production. Lakes generally progress through the following trophic phases or states: **Oligotrophic** -- Low algal or plant productivity; **Mesotrophic** -- Medium algal or plant productivity; **Eutrophic** -- High algal or plant productivity; and productivity; **Hypereutrophic** -- Very high algal or plant productivity and light limited. That is, instead of growth being limited by nutrient availability (as it is in other trophic conditions), growth becomes limited by light.
Unique Water	A surface water classified as an outstanding state resource water under Arizona Administrative Code R18-11-112.
USFWS	United States Fish and Wildlife Service
USFS	United States Forest Service
USGS	United States Geological Survey
UST	Underground Storage Tanks Program for eliminating the release of toxic chemicals from storage tanks.
Waters of the United States	(See "surface water" definition.)
WTP	Water Treatment Plant for drinking water treatment.
WWTP	Wastewater Treatment Plant

UNITS OF MEASUREMENT AND CONVERSIONS

MEASUREMENT USE	UNIT	EQUIVALENT UNITS OR CONVERSION
Bacteria concentration in water	colony forming units (CFU) per 100 milliliter	
Chemical concentrations in water	milligram per liter (mg/L) microgram per liter (μg/L)	1 mg/L = 0.001 grams per liter 1 mg/L = parts per million (ppm) 1 μg/L = 0.001 milligram per liter (mg/l) 1 μg/L = 0.000001 grams per liter 1 μg/L = 1 parts per billion (ppb)
Chemical concentrations in animal tissue and sediment	milligram per kilogram (mg/kg) microgram per kilogram (μg/kg)	1 mg/kg = 1 parts per million (ppm) 1 mg/kg = 1 microgram per gram (μg/g) 1 μg/kg = 1 parts per billion (ppb)
Ground water quantity	acre-feet	1 acre-foot = 325,900 gallons
pH in water	standard unit (SU)	
Radiochemical concentrations in water	picocuries per liter (pCi/L)	
Rate of flow	cubic feet per second (cfs)	1 cfs = 448.83 gallons per minute (gpm) 1 cfs = 646,000 gallons per day (gpd)
Lake area	acres	
Stream length	miles	1 mile = 1.6 kilometers (km)
Watershed size	square miles	1 square mile = 640 acres per square mile
Water turbidity (ability of light to travel through the water)	Nephelometric Turbidity Unit (NTU)	